# Federal State Budgetary Educational Institution of Higher Education "Privolzhsky Research Medical University" Ministry of Health of the Russian Federation



31 August 2021

#### WORKING PROGRAM

Name of the academic discipline: SELECTED ISSUES OF PROPAEDEUTICS OF INTERNAL DISEASES

Specialty: 31.05.01 GENERAL MEDICINE

(code, name)

Qualification: GENERAL PRACTITIONER

Department: Endocrinology and Internal Medicine

Mode of study: FULL-TIME

Labor intensity of the academic discipline: 72 academic hours

The working program has been developed in accordance with the Federal State Educational Standard for specialty 31.05.01 GENERAL MEDICINE approved by Order of the Ministry of Science and Higher Education of the Russian Federation No. 988 of August 12, 2020.

Developers of the working program:

Morozova Elena Pavlovna, Candidate of Medical Sciences, Docent of the Department of Endocrinology and Internal Medicine.

**Reviewers:** Necrasov Alexey Anatolievich, Doctor of Medical Sciences, Docent, The head of the Department of Faculty and Policlinic Therapy of "Privolzhsky Research Medical University";

Grygorieva Natalia Yurievna, Doctor of Medical Sciences, Docent, The head of the Department of Clinical Medicine of Nyzhegorodsky University named by N.I. Lobachevsky

The program was reviewed and approved at the department meeting of Endocrinology and Internal Medicine.

protocol

№ 9, date 15 of April 2021 y.

Head of the Department of Endocrinology and Internal Medicine,

Doctor of Medical Sciences professor,

(Strongin L.G.) (Strongin L.G.)

April 15, 2021

**AGREED** 

Deputy chief of Head of the EMA

thet

L. V. Lovtsova

April 15, 2021

### 1. The purpose and objectives of mastering the academic discipline "SELECTED ISSUES OF PROPAEDEUTICS OF INTERNAL DISEASES"

1.1. The purpose of mastering the discipline:

As a result of mastering the discipline program, a graduate should have universal, general professional and professional competencies: CC - 1,4,5; OPC - 1, 4, 5,10; PC - 5, 6, 7, necessary to achieve work functions in accordance with the Professional standard of a medical doctor (district therapist)

Universal competencies:

Systemic and critical thinking (category)

CC-1 is able to carry out a critical analysis of problem situations based on a systematic approach, to develop a strategy of actions

Communication.

UK-4 is able to apply modern communication technologies, including in a foreign language, for academic and professional interaction

Cross-cultural interaction

CC-5 is able to analyze and take into account the diversity of cultures in the process of intercultural interaction

General professional competencies:

Ethical and legal foundations of professional activity.

OPK-1 is able to implement moral and legal norms, ethical and deontological principles in professional activity

Diagnostic instrumental methods of examination

OPK-4 is capable of using medical devices provided for by the procedure for providing medical care, as well as conducting examinations of the patient in order to establish a diagnosis

Etiology and pathogenesis

OPK-5 is able to evaluate morphofunctional, physiological states and pathological processes in the human body to solve professional tasks

Information literacy

OPK-10 is able to solve standard tasks of professional activity using information, bibliographic resources, medical and biological terminology, information and communication technologies, taking into account the basic requirements of information security

Professional:

Conducting a patient examination in order to establish a diagnosis (labor function)

PC-5 is able to collect complaints, anamnesis of the patient's life and illness, conduct a complete physical examination of the patient (examination, palpation, percussion, auscultation), formulate a preliminary diagnosis and make a plan for laboratory and instrumental examinations of the patient

The PC-6 is able to refer the patient for laboratory, instrumental examination, for consultation with specialist doctors if there are medical indications in accordance with the current procedures for providing medical care, on issues of providing medical care taking into account the standards of medical care, as well as to refer the patient for specialized medical care in inpatient conditions or in a day hospital when availability of medical indications in accordance with the current procedures for the provision of medical care, clinical recommendations (treatment protocols) on the provision of medical care, taking into account the standards of medical care

PC-7 is able to carry out differential diagnostics with other diseases/ conditions, including urgent ones, to establish a diagnosis taking into account the current international statistical classification of diseases and health-related problems (ICD)

#### 1.2. Tasks of the discipline:

1. To form knowledge of symptoms, syndromes, features of anamnesis, modern methods

of clinical, laboratory and instrumental examination of patients with diseases of internal organs; etiology, pathogenesis, clinical manifestations, features of the course and possible complications occurring in typical form in adult patients of various age groups; diagnostic criteria of diseases and emergency conditions; methodology of diagnosis in according to the modern International Statistical Classification of Diseases ICD-10 (11)

- 2. To form the ability to determine the status of the patient: to collect anamnesis, to conduct a survey of the patient and / or his relatives, to conduct a physical examination of the patient (examination, palpation, percussion, auscultation, blood pressure measurement, etc.); to conduct an initial examination of all body systems.
- 3. To form the skills of: evaluating the results of physical examination of patients with diseases of internal organs; interpreting the results of laboratory, instrumental diagnostic methods; compiling an algorithm for making a detailed clinical diagnosis in accordance with the modern International Statistical Classification of Diseases ICD-10 (11)
- 4. To provide the opportunity to acquire practical experience in the diagnosis of diseases of internal organs in the conditions of a simulation center3.

#### 1.3. Requirements to the deliverables of mastering the discipline

At the end of the course of Propaedeutics of internal diseases, which includes a series of lectures, clinical practical classes, independent work, the student must:

#### Know:

- Algorithm of examination of therapeutic patients, rules and stages of examination of the patient, physical methods of examination of the patient;
- Anatomical and physiological, age and sexual characteristics of a healthy and sick person;
- The causes of the main pathological processes in the body and the mechanisms of their development; etiology, pathogenesis and preventive measures of the most common diseases;
- The main clinical symptoms and syndromes of diseases of internal organs, urgent conditions in patients with various therapeutic diseases, taking into account their course;
- Symptomatology of the most common diseases of internal organs, clinical picture, features of the course and possible complications of the most common diseases occurring in a typical form in different age groups;
- Classical diagnostic methods, their diagnostic capabilities in the examination of a patient with a therapeutic profile, modern methods of clinical, laboratory, instrumental examination of patients (immunological, endoscopic, radiation diagnostic methods);
- Methodology of diagnosis, diagnostic criteria. Principles of clinical diagnosis in a therapeutic patient in accordance with the modern International Statistical Classification of Diseases ICD-10 (11);
  - The structure of the medical history and the rules for filling it out and maintaining;
- Lexical minimum of general and terminological character, basic medical terminology in Latin and foreign languages;
- Principles of ethics and deontology, rules of conduct of a doctor with colleagues, with secondary and junior medical staff, with a patient, with his relatives;
- Factors shaping human health; diseases associated with the adverse effects of climatic and social factors.

#### Be able to:

- Conduct a survey of the patient or his relatives, collect anamnesis of life and history of the disease in order to determine the status of the patient and obtain complete information about the disease, establishing possible causes of its occurrence in typical cases;
- Assess the factors affecting the patient's physical and psychological health: professional, environmental, cultural, ethnic, religious, individual, family, social risk factors;

- Conduct a clinical examination of patients using physical methods (examination, percussion, palpation, auscultation, measurement of blood pressure, respiratory rate, pulse) and identify objective signs of the disease;
  - Conduct an initial examination of the patient's systems and organs;
- Identify the main pathological symptoms and syndromes, urgent conditions in patients with various therapeutic diseases, taking into account their course and substantiate them;
- Establish, substantiate and formulate a clinical diagnosis of the most common diseases of internal organs occurring in a typical form in accordance with the International Classification of Diseases ICD 10 (11);
- Assess the patient's condition and priorities for making a decision on the need to provide him with medical care: critical condition, pain syndrome, chronic disease, infectious disease, disability, geriatric problems;
- To plan the volume of additional laboratory and instrumental studies in accordance with the prognosis of the disease, to clarify the diagnosis and obtain a reliable result;
- Decipher typical ECGs in 12 leads of a healthy person, as well as patients with the most frequent rhythm and conduction disorders, with ventricular myocardial hypertrophy, acute myocardial infarction and chronic forms of coronary artery disease;
  - Interpret the spirogram in obstructive and restrictive types of respiratory disorders;
  - Evaluate the phonocardiogram for mitral, aortic and tricuspid defects;
- Evaluate the results of a general blood test, urine, sputum, feces, pleural effusion, as well as a biochemical blood test;
- To determine changes in the main pulmonary syndromes from the radiograph of the lungs;
- Evaluate the results of ultrasound examination of internal organs and the results of echocardiography;
- Present the results of the examination of the patient in the form of a medical history with justification of the preliminary diagnosis, registration of a temperature sheet and drawing up a plan for further examination of the patient. To report the patient's medical history at a medical conference;
  - Work with scientific and medical literature;
  - Make a public presentation, report, and lead a discussion;
- To train patients and their relatives in basic hygienic measures of a health-improving nature, skills of self-control of basic physiological indicators that contribute to the preservation and promotion of health, disease prevention.
- To carry out their activities taking into account the moral, ethical and legal norms accepted in society, to keep medical secrets;
- Build and maintain working relationships with other members of the team; protect the rights of the doctor and the patient;
- Work with texts of professional content in a foreign language, use at least 900 terminological units and term elements;

#### Be able to:

Have practical experience:

- Applying medical knowledge in practice;
- Communication with medical personnel, with patients and their relatives, taking into account ethnic, confessional and cultural differences, ethical and deontological aspects of medical activity;
- Work with patients to inform them and their relatives in accordance with the requirements of the "informed consent" rules;
- The use of foreign languages to the extent necessary for communication and obtaining information from foreign sources, reading and writing skills in Latin clinical and pharmaceutical terms and recipes;
  - Work with modern medical scientific literature and regulatory documents;

- Collaboration with colleagues of related specialties;
- Conducting a physical general clinical examination of the patient (survey, examination, palpation, percussion, auscultation, blood pressure measurement, assessment of pulse, respiration, ECG characteristics);
  - Filling in the inpatient patient's medical history;
- Carrying out diagnostic measures of pathological symptoms and syndromes, urgent conditions in patients with various therapeutic diseases, taking into account their course;
- Interpretation of the results of laboratory, instrumental studies and methods of radiation diagnostics;
- Making a clinical diagnosis in a therapeutic patient, taking into account generally accepted requirements and the International Classification of Diseases ICD10 (11);
- Development of a plan of therapeutic and preventive measures taking into account the peculiarities of the development and course of the disease;
- Work on teaching patients and their relatives basic hygienic measures of a health-improving nature, skills of self-control of basic physiological indicators that contribute to the preservation and promotion of health, disease prevention.;
- Work on a personal computer using modern statistical programs of medical statistics and analysis.
- 2. Position of the academic discipline in the structure of the General Educational Program of Higher Education (GEP HE) of the organization.

The place of discipline in the structure of the OOP in the FGBOU IN the PIM of the Ministry of Health of Russia.

2.1. The discipline belongs to the academic cycle of Block 1 of the Discipline (modules), the variable part, the discipline of choice B1.V.DV.2

The discipline is studied in the sixth semester.

- 2.2. To study the discipline requires knowledge, skills and practical experience formed by previous disciplines and practices: physics, mathematics, chemistry, bioorganic chemistry, biology, anatomy, patient care, biochemistry, clinical aspects of biochemistry, normal physiology, methods of research of physiological functions, pathological physiology, clinical pathophysiology, pathological anatomy, clinical pathological anatomy, pharmacology, first aid, educational practice patient care of therapeutic profile.
- 2.3. The study of the discipline is necessary to gain knowledge, skills and practical experience formed by subsequent disciplines and practices: faculty therapy, occupational diseases, polyclinic therapy, hospital therapy, endocrinology, infectious diseases, rheumatology, gastroenterology, fundamentals of emergency care, industrial practice physician's assistant, industrial practice assistant physician outpatient clinic.

### 3. Deliverables of mastering the academic discipline and metrics of competence acquisition

Mastering the discipline aims at acquiring the following universal (UC) or/and general

professional (GPC) or/and professional (PC) competencies

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| and experience IUK 1.3 Has practical experience: researching the problems of professional activity using analysis, synthesis and other methods of intellectual activity; developing strategies for solving professional problems methods of critical analysis and evaluation of modern scientific achievements; basic principles of critical analysis to gain new knowledge based on analysis, synthesis, etc.; collect data on complex scientific problems related to to the professional field; to search for information and  | and experience IUK 1.3 Has practical experience: researching the problems of professional activity using analysis, synthesis and other methods of intellectual activity; developing strategies for solving professional problems methods of critical analysis and evaluation of modern scientific achievements; basic principles of critical analysis to gain new knowledge based on analysis, synthesis,   | soli<br>bas<br>act<br>exp<br>and   | lutions<br>sed on<br>tions,<br>periment<br>d   |   |
| IUK 1.3 Has practical experience: researching the problems of professional activity using analysis, synthesis and other methods of intellectual activity; developing strategies for solving professional problems methods of critical analysis and evaluation of modern scientific achievements; basic principles of critical analysis to gain new knowledge based on analysis, synthesis, etc.; collect data on complex scientific problems related to to the professional field; to search for information and   | IUK 1.3 Has practical experience: researching the problems of professional activity using analysis, synthesis and other methods of intellectual activity; developing strategies for solving professional problems methods of critical analysis and evaluation of modern scientific achievements; basic principles of critical analysis to gain new knowledge based on analysis, synthesis,  | bas<br>act<br>exp<br>and   | sed on tions, periment d   |   |
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| researching the problems of professional activity using analysis, synthesis and other methods of intellectual activity; developing strategies for solving professional problems methods of critical analysis and evaluation of modern scientific achievements; basic principles of critical analysis to gain new knowledge based on analysis, synthesis, etc.; collect data on complex scientific problems related to to the professional field; to search for information and   | researching the problems of professional activity using analysis, synthesis and other methods of intellectual activity; developing strategies for solving professional problems methods of critical analysis and evaluation of modern scientific achievements; basic principles of critical analysis to gain new knowledge based on analysis, synthesis,  | exp  | periment<br>d  |   |
| problems of professional activity using analysis, synthesis and other methods of intellectual activity; developing strategies for solving professional problems methods of critical analysis and evaluation of modern scientific achievements; basic principles of critical analysis to gain new knowledge based on analysis, synthesis, etc.; collect data on complex scientific problems related to to the professional field; to search for information and   | problems of professional activity using analysis, synthesis and other methods of intellectual activity; developing strategies for solving professional problems methods of critical analysis and evaluation of modern scientific achievements; basic principles of critical analysis to gain new knowledge based on analysis, synthesis,  | and  | d  |   |
| professional activity using analysis, synthesis and other methods of intellectual activity; developing strategies for solving professional problems methods of critical analysis and evaluation of modern scientific achievements; basic principles of critical analysis to gain new knowledge based on analysis, synthesis, etc.; collect data on complex scientific problems related to to the professional field; to search for information and   | professional activity using analysis, synthesis and other methods of intellectual activity; developing strategies for solving professional problems methods of critical analysis and evaluation of modern scientific achievements; basic principles of critical analysis to gain new knowledge based on analysis, synthesis,  |  |  |   |
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| synthesis and other methods of intellectual activity; developing strategies for solving professional problems methods of critical analysis and evaluation of modern scientific achievements; basic principles of critical analysis to gain new knowledge based on analysis, synthesis, etc.; collect data on complex scientific problems related to to the professional field; to search for information and   | synthesis and other methods of intellectual activity; developing strategies for solving professional problems methods of critical analysis and evaluation of modern scientific achievements; basic principles of critical analysis to gain new knowledge based on analysis, synthesis,  |  |  |   |
| methods of intellectual activity; developing strategies for solving professional problems methods of critical analysis and evaluation of modern scientific achievements; basic principles of critical analysis to gain new knowledge based on analysis, synthesis, etc.; collect data on complex scientific problems related to to the professional field; to search for information and   | methods of intellectual activity; developing strategies for solving professional problems methods of critical analysis and evaluation of modern scientific achievements; basic principles of critical analysis to gain new knowledge based on analysis, synthesis,  |  |  |   |
| activity; developing strategies for solving professional problems methods of critical analysis and evaluation of modern scientific achievements; basic principles of critical analysis to gain new knowledge based on analysis, synthesis, etc.; collect data on complex scientific problems related to to the professional field; to search for information and   | activity; developing strategies for solving professional problems methods of critical analysis and evaluation of modern scientific achievements; basic principles of critical analysis to gain new knowledge based on analysis, synthesis,  |  |  |   |
| strategies for solving professional problems methods of critical analysis and evaluation of modern scientific achievements; basic principles of critical analysis to gain new knowledge based on analysis, synthesis, etc.; collect data on complex scientific problems related to to the professional field; to search for information and  | strategies for solving professional problems methods of critical analysis and evaluation of modern scientific achievements; basic principles of critical analysis to gain new knowledge based on analysis, synthesis,   |  |  |   |
| professional problems methods of critical analysis and evaluation of modern scientific achievements; basic principles of critical analysis to gain new knowledge based on analysis, synthesis, etc.; collect data on complex scientific problems related to to the professional field; to search for information and   | professional problems methods of critical analysis and evaluation of modern scientific achievements; basic principles of critical analysis to gain new knowledge based on analysis, synthesis,  |  |  |   |
| methods of critical analysis and evaluation of modern scientific achievements; basic principles of critical analysis to gain new knowledge based on analysis, synthesis, etc.; collect data on complex scientific problems related to to the professional field; to search for information and   | methods of critical analysis and evaluation of modern scientific achievements; basic principles of critical analysis to gain new knowledge based on analysis, synthesis,  |  |  |   |
| analysis and evaluation of modern scientific achievements; basic principles of critical analysis to gain new knowledge based on analysis, synthesis, etc.; collect data on complex scientific problems related to to the professional field; to search for information and   | analysis and evaluation of modern scientific achievements; basic principles of critical analysis to gain new knowledge based on analysis, synthesis,  |  |  |   |
| of modern scientific achievements; basic principles of critical analysis to gain new knowledge based on analysis, synthesis, etc.; collect data on complex scientific problems related to to the professional field; to search for information and   | of modern scientific achievements; basic principles of critical analysis to gain new knowledge based on analysis, synthesis,  |  |  |   |
| achievements; basic principles of critical analysis to gain new knowledge based on analysis, synthesis, etc.; collect data on complex scientific problems related to to the professional field; to search for information and  | achievements; basic principles of critical analysis to gain new knowledge based on analysis, synthesis,   |  |  |   |
| principles of critical analysis to gain new knowledge based on analysis, synthesis, etc.; collect data on complex scientific problems related to to the professional field; to search for information and  | principles of critical analysis to gain new knowledge based on analysis, synthesis,   |  |  |   |
| analysis to gain new knowledge based on analysis, synthesis, etc.; collect data on complex scientific problems related to to the professional field; to search for information and   | analysis to gain new knowledge based on analysis, synthesis,  |  |  |   |
| knowledge based on analysis, synthesis, etc.; collect data on complex scientific problems related to to the professional field; to search for information and  | knowledge based on analysis, synthesis,   |  |  |   |
| analysis, synthesis, etc.; collect data on complex scientific problems related to to the professional field; to search for information and   | analysis, synthesis,  |  |  |   |
| etc.; collect data on complex scientific problems related to to the professional field; to search for information and  |   |  |  |   |
| complex scientific problems related to to the professional field; to search for information and  |   |  |  |   |
| problems related to to the professional field; to search for information and   |   |  |  |   |
| the professional field; to search for information and  |   |  |  |   |
| to search for information and  |   |  |  |   |
| information and  |   |  |  |   |
|  |   |  |  |   |
|  |   |  |  |   |
|  | solutions based on  | 1  |  |   |
| actions, experiment  | actions, experiment   |  |  |   |
| and experience   | -   |  |  |   |
| 2. UC-4 is able to apply 4.1 Knows: the basics fundament express writing skills  | 11 7  |  |  | writing skills  |
| modern of oral and written als of oral your related to   | modern of oral and written als  | 1  |  | malatad ta  |
| communication   communication in   and written   thoughts in   professional  | communication communication in and  | 1  | -  | related to  |
| technologies, Russian and foreign communic Russian activity;   |   | s of oral you  | ur 1   |   |
| including in a languages, functional ation in and a experience in  | including in a languages, functional ation  | s of oral you<br>ad written tho  | ur 1 oughts in 1   | professional  |

|    |      | Ι                        |  |                  | Ι                     | · · · · · · · · · · · · · · · · · · · |
|----|------|--------------------------|--|------------------|-----------------------|---------------------------------------|
|    |      | foreign                  | styles of the native                     | Russian          | foreign               | translating                           |
|    |      | language(s), for         | language, requirements                   | and              | language              | medical texts                         |
|    |      | academic and             | for business                             | foreign          | in business           | from a                                |
|    |      | professional             | communication,                           | languages,       | communic              | foreign                               |
|    |      | interaction              | modern means of                          | functional       | ation                 | language into                         |
|    |      |                          | information and                          | styles of        |                       | Russian;                              |
|    |      |                          | communication                            | the native       |                       | experience in                         |
|    |      |                          | technologies                             | language,        |                       | speaking                              |
|    |      |                          | IUK 4.2 Can: express                     | requireme        |                       | Russian and                           |
|    |      |                          | your thoughts in                         | nts for          |                       | foreign                               |
|    |      |                          | Russian and a foreign                    | business         |                       | languages                             |
|    |      |                          | language in business                     | communic         |                       |                                       |
|    |      |                          | communication                            | ation,           |                       |                                       |
|    |      |                          | Russian Russian                          | modern           |                       |                                       |
|    |      |                          | Specialist                               | means of         |                       |                                       |
|    |      |                          | 4.3 Has practical                        | informatio       |                       |                                       |
|    |      |                          | experience: drafting                     | n and            |                       |                                       |
|    |      |                          | texts in Russian and                     | communic         |                       |                                       |
|    |      |                          | foreign languages                        | ation            |                       |                                       |
|    |      |                          | related to professional                  | technologi       |                       |                                       |
|    |      |                          | activities; experience                   | es               |                       |                                       |
|    |      |                          | in translating medical                   |                  |                       |                                       |
|    |      |                          | texts from a foreign                     |                  |                       |                                       |
|    | HC 7 | . 11                     | language into Russian;                   | .1 .             |                       | 1 '11 C                               |
| 3. | UC-5 | is able to               | IUK5.1Knows: the                         | the main         | to present            | skills of                             |
|    |      | analyze and take         | main categories of                       | categories       | profession            | productive                            |
|    |      | into account the         | philosophy, the laws of                  | of               | al                    | interaction in                        |
|    |      | diversity of             | historical                               | philosophy       | informatio            | a f                                   |
|    |      | cultures in the          | development, the basics of intercultural | , the laws<br>of | n<br>                 | professional                          |
|    |      | process of intercultural | communication; the                       | historical       | competently and in an | environment,<br>taking into           |
|    |      | interaction of           | basic concepts of                        | developme        | accessible            | account                               |
|    |      | interaction of           | human interaction in                     | nt, the          | manner in             | national,                             |
|    |      |                          | the organization                         | basics of        | the process           | ethno-                                |
|    |      |                          | 5.2 will be able to:                     | intercultur      | of                    | cultural,                             |
|    |      |                          | present professional                     | al               | intercultur           | confessional                          |
|    |      |                          | information                              | communic         | al                    | characteristic                        |
|    |      |                          | competently and in an                    | ation; the       | interaction           | s;                                    |
|    |      |                          | accessible manner in                     | basic            | ; to                  | overcoming                            |
|    |      |                          | the process of                           | concepts         | observe               | communicati                           |
|    |      |                          | intercultural                            | of human         | ethical               | ve,                                   |
|    |      |                          | interaction; observe                     | interaction      | norms and             | educational,                          |
|    |      |                          | ethical norms and                        | in the           | human                 | ethnic,                               |
|    |      |                          | human rights; analyze                    | organizatio      | rights; to            | confessional                          |
|    |      |                          | the features of social                   | n                | analyze the           | and other                             |
|    |      |                          | interaction taking into                  |                  | features of           | barriers in                           |
|    |      |                          | account national,                        |                  | social                | the process                           |
|    |      |                          | ethno-cultural,                          |                  | interaction           | of                                    |
|    |      |                          | confessional                             |                  | taking into           | intercultural                         |
|    |      |                          | characteristics                          |                  | account               | interaction                           |
|    |      |                          | IUK 5.3 Has practical                    |                  | national,             |                                       |
|    |      |                          | experience in:                           |                  | ethno-                |                                       |

|    |       |                  | productive interaction   |              | cultural,    |               |
|----|-------|------------------|--------------------------|--------------|--------------|---------------|
|    |       |                  | in a professional        |              | confession   |               |
|    |       |                  | environment, taking      |              | al           |               |
|    |       |                  | into account national,   |              | characteris  |               |
|    |       |                  | ethno-cultural,          |              | tics         |               |
|    |       |                  | confessional             |              |              |               |
|    |       |                  | characteristics;         |              |              |               |
|    |       |                  | overcoming               |              |              |               |
|    |       |                  | communicative,           |              |              |               |
|    |       |                  | educational, ethnic,     |              |              |               |
|    |       |                  | confessional and other   |              |              |               |
|    |       |                  | barriers in the process  |              |              |               |
|    |       |                  | of intercultural         |              |              |               |
|    |       |                  | interaction.             |              |              |               |
| 4. | OPC-1 | is able to       | IOPK 1.1 Knows:          | lagal        | opply miles  | practical     |
| 4. | OPC-1 |                  |                          | legal        | apply rules  | -             |
|    |       | implement moral  | fundamentals of          | aspects of   | and norms    | experience:   |
|    |       | and legal norms, | medical ethics and       | medical      | of           | solving       |
|    |       | ethical and      | deontology;              | activity to  | interaction  | standard      |
|    |       | deontological    | fundamentals of          | apply        | of a doctor  | tasks of      |
|    |       | principles in    | legislation in the field | ethical      | with         | professional  |
|    |       | professional     | of healthcare; legal     | norms and    | colleagues   | activity      |
|    |       | activity         | aspects of medical       | principles   | and          | based on      |
|    |       |                  | activity                 | of           | patients     | ethical norms |
|    |       |                  | IOPC 1.2 is able to:     | behavior     | (their legal | and           |
|    |       |                  | apply ethical norms      | of a         | representat  | deontological |
|    |       |                  | and principles of        | medical      | ives)        | principles    |
|    |       |                  | behavior of a medical    | worker       |              | when          |
|    |       |                  | worker in the            | when         |              | interacting   |
|    |       |                  | performance of their     | performing   |              | with          |
|    |       |                  | professional duties;     | their        |              | colleagues    |
|    |       |                  | knowledge of modern      | profession   |              | and patients  |
|    |       |                  | legislation in the field | al duties;   |              | (their legal  |
|    |       |                  | of healthcare in         | knowledge    |              | representativ |
|    |       |                  | solving professional     | of modern    |              | es),          |
|    |       |                  | tasks; apply rules and   | legislation  |              | knowledge of  |
|    |       |                  | norms of interaction of  | in the field |              | legal aspects |
|    |       |                  | a doctor with            | of           |              | of medical    |
|    |       |                  | colleagues and patients  | healthcare   |              | activity      |
|    |       |                  | (their legal             | when         |              |               |
|    |       |                  | representatives)         | solving      |              |               |
|    |       |                  | IOPK 1.3 Has practical   | problems     |              |               |
|    |       |                  | experience: solving      | of           |              |               |
|    |       |                  | standard tasks of        | profession   |              |               |
|    |       |                  | professional activity    | al activity; |              |               |
|    |       |                  | on the basis of ethical  | ar activity, |              |               |
|    |       |                  | norms and                |              |              |               |
|    |       |                  | deontological            |              |              |               |
|    |       |                  | principles when          |              |              |               |
|    |       |                  | interacting with         |              |              |               |
|    |       |                  | colleagues and patients  |              |              |               |
|    |       |                  |                          |              |              |               |
|    |       |                  | (their legal             |              |              |               |
|    | ]     |                  | representatives),        |              |              |               |

|    | T     | <u> </u>           |                           | T               |                 | Г              |
|----|-------|--------------------|---------------------------|-----------------|-----------------|----------------|
|    |       |                    | knowledge of legal        |                 |                 |                |
|    |       |                    | aspects of medical        |                 |                 |                |
|    |       |                    | activity                  |                 |                 |                |
| 5. | OPC-4 | is able to use     | IOPK 4.1 Knows the        | collect         | collect         | collection of  |
|    |       | medical devices    | methodology for           | complaints      | complaints      | complaints,    |
|    |       | provided for by    | collecting anamnesis      | anamnesis       | anamnesis       | anamnesis of   |
|    |       | the procedure for  | of life and diseases,     | of life and     | of life and     | life and       |
|    |       | providing          | complaints from           | disease in      | disease in      | disease in     |
|    |       | medical care, as   | patients (their legal     | patients        | patients        | patients       |
|    |       | well as to         | representatives); the     | (their legal    | (their legal    | (their legal   |
|    |       | conduct            | methodology of            | representat     | representat     | representativ  |
|    |       | examinations of    | examination and           | ives),          | ives),          | es),           |
|    |       | the patient in     | physical examination;     | identify        | identify        | identification |
|    |       | order to establish | clinical picture,         | risk factors    | risk factors    | of risk        |
|    |       | the diagnosis      | methods of diagnosis      | and causes      | and causes      | factors and    |
|    |       |                    | of the most common        | of              | of              | causes of      |
|    |       |                    | diseases; methods of      | diseases;       | diseases;       | diseases;      |
|    |       |                    | laboratory and            | apply           | apply           | examination    |
|    |       |                    | instrumental studies to   | methods of      | methods of      | and physical   |
|    |       |                    | assess the state of       | examinatio      | examinatio      | examination    |
|    |       |                    | health, medical           | n and           | n and           | of patients;   |
|    |       |                    | indications for           | physical        | physical        | diagnosis of   |
|    |       |                    | conducting research,      | examinatio      | examinatio      | the most       |
|    |       |                    | rules for interpreting    | n of            | n of            | common         |
|    |       |                    | their results;            | patients;       | patients;       | diseases;      |
|    |       |                    | international statistical | interpret       | interpret       | identification |
|    |       |                    | classification of         | the results     | the results     | of risk        |
|    |       |                    | diseases and health-      | of              | of              | factors for    |
|    |       |                    | related problems          | examinatio      | examinatio      | major          |
|    |       |                    | (ICD); conditions         | n and           | n and           | oncological    |
|    |       |                    | requiring emergency       | physical        | physical        | diseases;      |
|    |       |                    | medical care; the         | examinatio      |                 |                |
|    |       |                    | procedure for the use     | n of            | n of            | of a           |
|    |       |                    | of medical devices in     | patients;       | patients;       | preliminary    |
|    |       |                    | accordance with           | diagnose        | diagnose        | diagnosis,     |
|    |       |                    | current medical           | the most        | the most        | drawing up a   |
|    |       |                    | procedures, clinical      | common          | common          | plan for       |
|    |       |                    | recommendations           | pathology       | pathology       | instrumental,  |
|    |       |                    | (treatment protocols)     | in patients;    | in patients;    | laboratory,    |
|    |       |                    | on the provision of       | identify        | identify        | additional     |
|    |       |                    | medical care, care        | risk factors    | risk factors    | studies,       |
|    |       |                    | taking into account the   | for             | for             | consultations  |
|    |       |                    | standards of medical      | oncologica      | oncologica      | of specialist  |
|    |       |                    | care                      | l diseases;     | l diseases;     | doctors;       |
|    |       |                    | IOPC 4.2 is able to:      | formulate       | formulate       | referrals of   |
|    |       |                    | collect complaints,       | a<br>proliminor | a<br>proliminar | patients for   |
|    |       |                    | anamnesis of life and     | preliminar      | preliminar      | instrumental,  |
|    |       |                    | disease in patients       | y<br>diagnosis  | y<br>diagnosis  | laboratory,    |
|    |       |                    | (their legal              | diagnosis,      | diagnosis,      | additional     |
|    |       |                    | representatives),         | make a          | make a          | studies,       |
|    |       |                    | identify risk factors     | plan for        | plan for        | consultations  |
|    |       |                    | and causes of disease     | conducting      | conducting      | of specialist  |

development; apply methods of examination and physical examination of patients; interpret the results of examination and physical examination of patients; diagnose the most common pathology in patients; identify risk factors for cancer; formulate a preliminary diagnosis, make a plan for conducting laboratory, instrumental and additional studies in patients in accordance with the procedures for providing medical care, clinical recommendations, taking into account the standards of medical care; refer patients to laboratory, instrumental and additional studies in accordance with the current procedures for providing medical care, clinical recommendations, taking into account the standards of medical care; refer patients for consultations with specialist doctors in accordance with the procedures for providing medical care, clinical recommendations, taking into account the standards of medical care; interpret and analyze the results of consultations by specialist doctors of patients; interpret and analyze the results of

laboratory, laboratory, instrument instrument al and al and additional additional studies in studies in patients in patients in accordance accordance with the with the procedures procedures for for providing providing medical medical care, care, clinical clinical recommen recommen dations, dations, taking into taking into account account the the standards standards of medical of medical care; refer care; refer patients to patients to laboratory, laboratory, instrument instrument al and al and additional additional studies in studies in accordance accordance with the with the current current procedures procedures for for providing providing medical medical care. care. clinical clinical recommen recommen dations, dations, taking into taking into account account the the standards standards of medical of medical care; refer care; refer patients for patients for consultatio consultatio ns with ns with specialist specialist doctors in doctors in accordance accordance with the with the

doctors in accordance with current medical care procedures, clinical recommendat ions, taking into account medical care standards; interpretation of data from additional (laboratory and instrumental) examinations of patients; making a preliminary diagnosis in accordance with the international statistical classification of diseases and healthrelated problems (ICD); differential diagnosis of diseases; recognition of conditions arising from sudden acute diseases. exacerbation of chronic diseases without obvious signs of a threat to the patient's life and requiring medical care in an urgent form; the use

basic (clinical) and additional (laboratory, instrumental) examination methods: conduct differential diagnosis of diseases in patients; to identify clinical signs of sudden acute diseases, conditions. exacerbations of chronic diseases without obvious signs of life-threatening, requiring medical care in an urgent form; to use medical devices in accordance with current medical procedures, clinical recommendations (treatment protocols) on the provision of medical care, assistance taking into account the standards of medical care IDOPK 4.3 Has practical experience in: collecting complaints, anamnesis of life and disease in patients (their legal representatives), identifying risk factors and causes of disease development; examination and physical examination of patients; diagnosis of the most common diseases; identification of risk factors for major oncological diseases; formulation of a preliminary diagnosis, drawing up a plan for instrumental, laboratory, additional studies, consultations of specialist doctors; referrals of patients for

procedures procedures for for providing providing medical medical care, care, clinical clinical recommen recommen dations, dations, taking into taking into account account the the standards standards of medical of medical care; care; interpret interpret and and analyze the analyze the results of results of consultatio consultatio ns by ns by specialist specialist doctors of doctors of patients; patients; interpret interpret and and analyze the analyze the results of results of basic basic (clinical) (clinical) and and additional additional (laboratory (laboratory instrument instrument al) al) examinatio examinatio n methods; n methods; conduct conduct differential differential diagnosis diagnosis of diseases of diseases in patients; in patients; to identify to identify clinical clinical signs of signs of

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chronic

acute

of medical devices in accordance with current medical procedures, clinical recommendat ions (treatment protocols) on the provision of medical care, care taking into account the standards of medical care

instrumental, laboratory, additional studies, consultations of specialist doctors in accordance with current medical care procedures, clinical recommendations, taking into account medical care standards; interpretation of data from additional (laboratory and instrumental) examinations of patients; making a preliminary diagnosis in accordance with the international statistical classification of diseases and healthrelated problems (ICD); differential diagnosis of diseases; recognition of conditions arising from sudden acute diseases, exacerbation of chronic diseases without obvious signs of a threat to the patient's life and requiring medical care in an urgent form; the use of medical devices in accordance with current medical procedures, clinical recommendations (treatment protocols) on the provision of medical care, assistance taking into account the standards of medical care methods of collecting anamnesis of life and diseases, complaints from patients (their legal representatives); methods of

diseases without obvious signs of lifethreatening , requiring medical care in an urgent form; to use medical devices in accordance with current medical procedures , clinical recommen dations (treatment protocols) on the provision of medical care. assistance taking into account the standards of medical care

diseases without obvious signs of lifethreatening , requiring medical care in an urgent form; to use medical devices in accordance with current medical procedures , clinical recommen dations (treatment protocols) on the provision of medical care. assistance taking into account the standards of medical care

|    | T     | T                 |                           | T          | T           |               |
|----|-------|-------------------|---------------------------|------------|-------------|---------------|
|    |       |                   | examination and           |            |             |               |
|    |       |                   | physical examination;     |            |             |               |
|    |       |                   | clinical picture,         |            |             |               |
|    |       |                   | methods of diagnosis      |            |             |               |
|    |       |                   | of the most common        |            |             |               |
|    |       |                   | diseases; methods of      |            |             |               |
|    |       |                   | laboratory and            |            |             |               |
|    |       |                   | instrumental studies to   |            |             |               |
|    |       |                   | assess the state of       |            |             |               |
|    |       |                   | health, medical           |            |             |               |
|    |       |                   | indications for           |            |             |               |
|    |       |                   | conducting research,      |            |             |               |
|    |       |                   | rules for interpreting    |            |             |               |
|    |       |                   | their results;            |            |             |               |
|    |       |                   | international statistical |            |             |               |
|    |       |                   | classification of         |            |             |               |
|    |       |                   | diseases and health-      |            |             |               |
|    |       |                   | related problems          |            |             |               |
|    |       |                   | (ICD); conditions         |            |             |               |
|    |       |                   | requiring urgent          |            |             |               |
|    |       |                   | medical care; the         |            |             |               |
|    |       |                   | procedure for the use     |            |             |               |
|    |       |                   | of medical devices in     |            |             |               |
|    |       |                   |                           |            |             |               |
|    |       |                   | accordance with the       |            |             |               |
|    |       |                   | current procedures for    |            |             |               |
|    |       |                   | the provision of          |            |             |               |
|    |       |                   | medical care, clinical    |            |             |               |
|    |       |                   | recommendations           |            |             |               |
|    |       |                   | (treatment protocols)     |            |             |               |
|    |       |                   | on the provision of       |            |             |               |
|    |       |                   | medical care,             |            |             |               |
|    |       |                   | assistance taking into    |            |             |               |
|    |       |                   | account the standards     |            |             |               |
|    |       |                   | of medical care           |            |             |               |
| 6. | OPC-5 | is able to assess | IOPK-5.1 Knows:           | anatomy,   | to evaluate | to check the  |
|    |       | morphofunctiona   | anatomy, histology,       | histology, | the main    | main          |
|    |       | l, physiological  | embryology,               | embryolog  | morphofun   | morphofuncti  |
|    |       | conditions and    | topographic anatomy,      | y,         | ctional     | onal data,    |
|    |       | pathological      | physiology,               | topographi | data,       | physiological |
|    |       | processes in the  | pathological anatomy      | c anatomy, | physiologi  | conditions    |
|    |       | human body to     | and physiology of         | physiology | cal         | and           |
|    |       | solve             | human organs and          | ,          | conditions  | pathological  |
|    |       | professional      | systems                   | pathologic | and         | processes in  |
|    |       | tasks,            | IOPC 5. 2 is able to:     | al anatomy | pathologic  | the human     |
|    |       |                   | evaluate the basic        | and        | al          | body          |
|    |       |                   | morphofunctional data,    | physiology | processes   |               |
|    |       |                   | physiological states      | of human   | in the      |               |
|    |       |                   | and pathological          | organs and | human       |               |
|    |       |                   | processes in the human    | systems    | body        |               |
|    |       |                   | body                      |            |             |               |
|    |       |                   | IOPK5. 3. Has             |            |             |               |
|    |       |                   | practical experience:     |            |             |               |
|    | İ     | <u>L</u>          | T cperionee.              | l          | 1           | 1             |

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|----|--------|-------------------|-------------------------|--------------|--------------|---------------|
|    |        |                   | assessment of basic     |              |              |               |
|    |        |                   | morphofunctional data,  |              |              |               |
|    |        |                   | physiological           |              |              |               |
|    |        |                   | conditions and          |              |              |               |
|    |        |                   | pathological processes  |              |              |               |
|    |        |                   | in the human body       |              |              |               |
|    |        |                   | when solving            |              |              |               |
|    |        |                   | professional tasks      |              |              |               |
| 7. | OPC-10 | is able to solve  | OPK10. 1.Knows: the     | to master    | to apply     | to master and |
|    |        | standard tasks of | capabilities of         | and apply    | modern       | apply         |
|    |        | professional      | reference information   | modern       | informatio   | modern        |
|    |        | activity using    | systems and             | informatio   | n and        | information   |
|    |        | information,      | professional databases; | n and        | communic     | and           |
|    |        | bibliographic     | methods of              | communic     | ation        | communicati   |
|    |        | resources,        | information retrieval,  | ation        | technologi   | on            |
|    |        | biomedical        | information and         | technologi   | es to solve  | technologies  |
|    |        | terminology,      | communication           | es in        | the tasks    | in            |
|    |        | information and   | technologies; modern    | profession   | of           | professional  |
|    |        | communication     | medical and biological  | al activity, | profession   | activity,     |
|    |        | technologies,     | terminology;            | taking into  | al activity; | taking into   |
|    |        | taking into       | fundamentals of         | account      | to carry     | account the   |
|    |        | account the basic | information security in | the basic    | out an       | basic         |
|    |        | requirements of   | professional activities | requireme    | effective    | requirements  |
|    |        | information       | IOPC10. 2.He is able    | nts of       | search for   | of            |
|    |        | security a        | to: apply modern        | informatio   | informatio   | information   |
|    |        |                   | information and         | n security   | n            | security      |
|    |        |                   | communication           |              | necessary    |               |
|    |        |                   | technologies to solve   |              | to solve     |               |
|    |        |                   | the tasks of            |              | the tasks    |               |
|    |        |                   | professional activity;  |              | of           |               |
|    |        |                   | carry out an effective  |              | profession   |               |
|    |        |                   | search for information  |              | al activity  |               |
|    |        |                   | necessary to solve the  |              | using        |               |
|    |        |                   | tasks of professional   |              | reference    |               |
|    |        |                   | activity using          |              | systems      |               |
|    |        |                   | reference systems and   |              | and          |               |
|    |        |                   | professional databases; |              | profession   |               |
|    |        |                   | use modern medical      |              | al           |               |
|    |        |                   | and biological          |              | databases;   |               |
|    |        |                   | terminology; master     |              | to use       |               |
|    |        |                   | and apply modern        |              | modern       |               |
|    |        |                   | information and         |              | medical      |               |
|    |        |                   | communication           |              | and          |               |
|    |        |                   | technologies in         |              | biological   |               |
|    |        |                   | professional activity,  |              | terminolog   |               |
|    |        |                   | taking into account the |              | y            |               |
|    |        |                   | basic requirements of   |              |              |               |
|    |        |                   | information security    |              |              |               |
|    |        |                   | IOPC 10 3. Has          |              |              |               |
|    |        |                   | practical experience in |              |              |               |
|    |        |                   | the use of modern       |              |              |               |
|    |        |                   | information and         |              |              |               |
|    | 1      | <u> </u>          |                         | l .          | L            | 1             |

|    |      |                    | bibliographic             |              |              |                |
|----|------|--------------------|---------------------------|--------------|--------------|----------------|
|    |      |                    | resources, the use of     |              |              |                |
|    |      |                    | special software and      |              |              |                |
|    |      |                    | automated information     |              |              |                |
|    |      |                    | systems to solve          |              |              |                |
|    |      |                    | standard tasks of         |              |              |                |
|    |      |                    | professional activity,    |              |              |                |
|    |      |                    | taking into account the   |              |              |                |
|    |      |                    | basic requirements of     |              |              |                |
|    |      |                    | information security,     |              |              |                |
|    |      |                    | the possibilities of      |              |              |                |
|    |      |                    | reference information     |              |              |                |
|    |      |                    | systems and               |              |              |                |
|    |      |                    | professional databases;   |              |              |                |
|    |      |                    | methods of                |              |              |                |
|    |      |                    | information retrieval,    |              |              |                |
|    |      |                    | information and           |              |              |                |
|    |      |                    | communication             |              |              |                |
|    |      |                    | technologies; modern      |              |              |                |
|    |      |                    | medical and biological    |              |              |                |
|    |      |                    | terminology;              |              |              |                |
|    |      |                    | fundamentals of           |              |              |                |
|    |      |                    | information security in   |              |              |                |
|    |      |                    | professional activity     |              |              |                |
| 8. | PC-5 | is able to collect | IPK 5.1 Knows: The        | The          | regularities | collecting     |
|    |      | complaints,        | legislation of the        | legislation  | of           | complaints,    |
|    |      | anamnesis of the   | Russian Federation in     | of the       | functionin   | anamnesis of   |
|    |      | patient's life and | the field of health       | Russian      | g of a       | the patient's  |
|    |      | illness, conduct a | protection, regulatory    | Federation   | healthy      | life and       |
|    |      | full physical      | legal acts and other      | in the field | human        | illness and    |
|    |      | examination of     | documents defining        | of health    | body and     | analyzing the  |
|    |      | the patient        | the activity medical      | protection,  | mechanis     | information    |
|    |      | (examination,      | organizations and         | regulatory   | ms of        | received;      |
|    |      | palpation,         | medical workers;          | legal acts   | ensuring     | conduct a      |
|    |      | percussion,        | methods of collecting     | and other    | health       | full physical  |
|    |      | auscultation),     | complaints, anamnesis     | documents    | from the     | examination    |
|    |      | formulate a        | of the patient's life and | defining     | standpoint   | of the patient |
|    |      | preliminary        | illness; the              | the          | of the       | (examination   |
|    |      | diagnosis and      | methodology of a          | activities   | theory of    | , palpation,   |
|    |      | draw up a plan     | complete physical         | of medical   | functional   | percussion,    |
|    |      | for laboratory     | examination of the        | organizatio  | systems;     | auscultation)  |
|    |      | and instrumental   | patient (examination,     | ns and       | features of  | and interpret  |
|    |      | examinations of    | palpation, percussion,    | medical      | regulation   | its results;   |
|    |      | the patient        | auscultation); etiology,  | workers;     | of           | determining    |
|    |      |                    | pathogenesis and          | the method   | functional   | the order of   |
|    |      |                    | pathomorphology,          | of failure,  | systems of   | the volume,    |
|    |      |                    | clinical picture,         | anamnesis    | the human    | content and    |
|    |      |                    | differential diagnosis,   | of life and  | body in      | sequence of    |
|    |      |                    | features of the course,   | disease of   | pathologic   | diagnostic     |
|    |      |                    | complications and         | the patient; | al           | measures       |
|    |      |                    | outcomes of diseases      | the method   | processes;   |                |
|    |      |                    | of internal organs;       | of           | methods of   |                |

|    |      |  | regularities of   | complete   | laboratory   |  |
|----|------|--|---|--|--|--|
|    |      |  | functioning of a  | physical   | and  |  |
|    |      |  | healthy human body  | examinatio   | instrument   |  |
|    |      |  | and mechanisms of   | n of the   | al studies   |  |
|    |      |  | ensuring health from  | patient  | to assess  |  |
|    |      |  | the standpoint of the   | (examinati   | the state of   |  |
|    |      |  | the standpoint of the theory of functional  | on,  | health,  |  |
|    |      |  | systems; features of  | palpation,   | medical  |  |
|    |      |  |   |  | indications  |  |
|    |      |  | regulation of functional systems of   | percussion, auscultatio  | for  |  |
|    |      |  | the human body in   | n);  | research,  |  |
|    |      |  | · ·   |  | rules for  |  |
|    |      |  | pathological processes;   | etiology,  |  |  |
|    |      |  | methods of laboratory and instrumental  | pathogenes is and  | interpretin  |  |
|    |      |  |   |  | g their  |  |
|    |      |  | studies to assess the   | pathomorp  | results  |  |
|    |      |  | state of health, medical indications for  | hology,<br>clinical  |  |  |
|    |      |  |   |  |  |  |
|    |      |  | research, rules for   | picture,<br>differential   |  |  |
|    |      |  | interpreting their results  |  |  |  |
|    |      |  | IPK 5.2 is able to:   | diagnosis, features of   |  |  |
|    |      |  | collect complaints,   |  |  |  |
|    |      |  | anamnesis of the  | the course, complicati   |  |  |
|    |      |  | patient's life and illness  | ons and  |  |  |
|    |      |  | and analyze the   | outcomes   |  |  |
|    |      |  | information received;   | of diseases  |  |  |
|    |      |  | conduct a complete  | of internal  |  |  |
|    |      |  | physical examination  |  |  |  |
|    |      |  | of the patient  | organs;  |  |  |
|    |      |  | (examination,   |  |  |  |
|    |      |  | palpation, percussion,  |  |  |  |
|    |      |  | auscultation) and   |  |  |  |
|    |      |  | interpret its results;  |  |  |  |
|    |      |  | determine the order of  |  |  |  |
|    |      |  | volume, content and   |  |  |  |
|    |      |  | sequence of diagnostic  |  |  |  |
|    |      |  | measures  |  |  |  |
| 9. | PC-6 | Is able to refer   | IPK 6 1. Knows:   | general  | to justify   | substantiatio  |
|    |      |  |   | issues of  | the need   | n of the need  |
|    |      | -  |   |  |  |  |
|    |      | instrumental   | medical care to the   | n of   | of   | -  |
|    |      |  |   | medical  | _  | examination  |
|    |      | consultation with  | laboratory and  | care to the  | examinatio   | of the   |
|    |      | specialist doctors   | instrumental studies to   | population   | n of the   | patient;   |
|    |      | if there are   | assess the state of   | methods of   | patient; to  | substantiatio  |
|    |      | medical  | health, medical   | laboratory   | justify the  | n of the need  |
|    |      | indications in   | indications for   | and  | need and   | and scope of   |
|    |      | accordance with  | conducting research,  | instrument   | scope of   | instrumental   |
|    |      | the current  | rules for interpreting  | al studies   | instrument   | examination  |
| 1  |      | procedures for   | their results;  | to assess  | al   | of the   |
|    | •    |  | mma and disma a fam   | 41- a 4 a 4 a a £  |  |  |
|    |      | providing  | procedures for  | the state of   | examinatio   | patient;   |
|    |      | examination, for consultation with specialist doctors if there are medical indications in accordance with the current procedures for | population methods of laboratory and instrumental studies to assess the state of health, medical indications for conducting research, rules for interpreting their results; | issues of organization of medical care to the population methods of laboratory and instrument al studies to assess | the need and scope of laboratory examinatio n of the patient; to justify the need and scope of instrument al | and scope of<br>laboratory<br>examination<br>of the<br>patient;<br>substantiatio<br>n of the need<br>and scope of<br>instrumental<br>examination<br>of the |

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|-----|------|--|---|---|---|--|
|     |      | clinical   | care, clinical  | medical   | patient; to   | of the need to   |
|     |      | recommendation   | recommendations   | indications   | justify the   | refer the  |
|     |      | s (treatment   | (treatment protocols)   | for   | need to   | patient for  |
|     |      | protocols) on the  | on the provision of   | conducting  | refer the   | consultations  |
|     |      | provision of   | medical care, standards   | research,   | patient for   | with   |
|     |      | medical care,  | of medical care   | rules for   | consultatio   | specialist   |
|     |      | taking into  | IPK 6 2. Is able to:  | interpretin   | ns with   | doctors;   |
|     |      | account the  | justify the need and  | g their   | specialist  | determinatio   |
|     |      | standards of   | scope of laboratory   | results;  | doctors; to   | n of medical   |
|     |      | medical care, as   | examination of the  | procedures  | determine   | indications  |
|     |      | well as to refer   | patient; justify the  | for   | medical   | for the  |
|     |      | the patient for  | need and scope of   | providing   | indications   | provision of   |
|     |      | specialized  | instrumental  | medical   | for the   | emergency,   |
|     |      | medical care in  | examination of the  | care,   | provision   | including  |
|     |      | inpatient  | patient; justify the  | clinical  | of  | emergency  |
|     |      | conditions or in   | need to refer the   | recommen  | emergency   | specialized,   |
|     |      | conditions of a  | patient for   | dations   | , including   | medical care   |
|     |      | day hospital in  | consultations with  | (treatment  | emergency   |  |
|     |      | the presence of  | specialist doctors;   | protocols)  | specialized   |  |
|     |      | medical  | determine medical   | on the  | , medical   |  |
|     |      | indications in   | indications for the   | provision   | care  |  |
|     |      | accordance with  | provision of  | of medical  |   |  |
|     |      | the current  | emergency, including  | care,   |   |  |
|     |      | procedures for   | emergency specialized,  | standards   |   |  |
|     |      | the provision of   | medical care  | of medical  |   |  |
|     |      | medical care,  |   | care  |   |  |
|     |      | clinical   |   |   |   |  |
|     |      | recommendation   |   |   |   |  |
|     |      | s (treatment   |   |   |   |  |
|     |      | protocols) on the  |   |   |   |  |
|     |      | provision of   |   |   |   |  |
|     |      | medical care,  |   |   |   |  |
|     |      | taking into  |   |   |   |  |
|     |      | account the  |   |   |   |  |
|     |      | standards of   |   |   |   |  |
|     |      | medical care   |   |   |   |  |
| 10. | PC-7 | is able to carry   | IPK 7.1 Knows:  | etiology,   | analyze the   | interpretation   |
|     |      | out differential   | etiology, pathogenesis  | pathogenes  | results of  | of the results   |
|     |      | diagnostics with   | and pathomorphology,  | is and  | the   | of collecting  |
|     |      | other  | clinical picture,   | pathomorp   | patient's   | information  |
|     |      | diseases/conditio  | differential diagnosis,   | hology,   | examinatio  | about the  |
|     |      | ns, including  | features of the course,   | clinical  | n, if   | patient's  |
|     |      | urgent ones, to  | complications and   | picture,  | necessary,  | disease;   |
|     |      | establish a  | outcomes of diseases  | differential  | justify and   | interpretation   |
|     |      | diagnosis taking   | of internal organs;   | diagnosis,  | plan the  | of data  |
|     |      | into account the   | methods of laboratory   | features of   | scope of  | obtained   |
|     |      | current  | and instrumental  | the course,   | additional  | during   |
|     |      | international  | studies to assess the   | complicati  | studies;  | laboratory   |
|     |      | statistical  | state of health, medical  | ons and   | interpret   | examination  |
|     |      | classification of  | indications for   | outcomes  | the results   | of the   |
|     |      | diseases and   | conducting research,  | of diseases   | of  | patient;   |
|     |      | health-related   | rules for interpreting  | of internal   | collecting  | interpretation   |
|     |      | ns, including urgent ones, to establish a diagnosis taking into account the current international statistical classification of diseases and | features of the course, complications and outcomes of diseases of internal organs; methods of laboratory and instrumental studies to assess the state of health, medical indications for conducting research, | clinical picture, differential diagnosis, features of the course, complicati ons and outcomes of diseases | n, if necessary, justify and plan the scope of additional studies; interpret the results of | patient's disease; interpretation of data obtained during laboratory examination of the patient; |

| Г |                |                          | T            | I . a .         |                |
|---|----------------|--------------------------|--------------|-----------------|----------------|
|   | problems (ICD) | their results; ICD       | organs;      | informatio      | of data        |
|   |                | IPK 7.2 is able to:      | methods of   | n about the     | obtained       |
|   |                | analyze the results of   | laboratory   | patient's       | during         |
|   |                | the patient's            | and          | disease;        | instrumental   |
|   |                | examination, if          | instrument   | interpret       | examination    |
|   |                | necessary, justify and   | al studies   | the data        | of the         |
|   |                | plan the scope of        | to assess    | obtained        | patient;       |
|   |                | additional studies;      | the state of | during the      | interpret data |
|   |                | interpret the results of | health,      | laboratory      | obtained       |
|   |                | collecting information   | medical      | examinatio      | during         |
|   |                | about the patient's      | indications  | n of the        | consultations  |
|   |                | disease; interpret the   | for          | patient;        | of the patient |
|   |                | data obtained during     | conducting   | interpret       | by specialist  |
|   |                | the laboratory           | research,    | the data        | doctors;       |
|   |                | examination of the       | rules for    | obtained        | differential   |
|   |                | patient; interpret the   | interpretin  | during the      | diagnosis of   |
|   |                | data obtained during     | g their      | instrument      | diseases of    |
|   |                | the instrumental         | results;     | al              | internal       |
|   |                | examination of the       | ICD          | examinatio      | organs from    |
|   |                | patient; interpret the   |              | n of the        | other          |
|   |                | data obtained during     |              | patient;        | diseases       |
|   |                | the consultations of the |              | interpret       |                |
|   |                | patient by specialist    |              | the data        |                |
|   |                | doctors; carry out       |              | obtained        |                |
|   |                | differential diagnosis   |              | during the      |                |
|   |                | of diseases internal     |              | consultatio     |                |
|   |                | organs from other        |              | ns of the       |                |
|   |                | diseases                 |              | patient by      |                |
|   |                |                          |              | specialist      |                |
|   |                |                          |              | doctors; to     |                |
|   |                |                          |              | carry out       |                |
|   |                |                          |              | differential    |                |
|   |                |                          |              | diagnostics     |                |
|   |                |                          |              | of diseases     |                |
|   |                |                          |              | of internal     |                |
|   |                |                          |              | organs          |                |
|   |                |                          |              | from other      |                |
|   |                |                          |              | diseases of     |                |
|   |                |                          |              | the             |                |
|   |                |                          |              | analysis of     |                |
|   |                |                          |              | the results     |                |
|   |                |                          |              | of the          |                |
|   |                |                          |              | examinatio      |                |
|   |                |                          |              | n of the        |                |
|   |                |                          |              | patient, if     |                |
|   |                |                          |              | necessary,      |                |
|   |                |                          |              | substantiat     |                |
|   |                |                          |              | ion and         |                |
|   |                |                          |              | planning of the |                |
|   |                |                          |              | volume of       |                |
|   |                |                          |              | additional      |                |
|   |                |                          |              | auditiOllai     |                |

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|  |  | studies |  |
|  |  |         |  |

### 4. Sections of the academic discipline and competencies that are formed when mastering them

| № | Competen ce code                         | Section name of the discipline  | The content of the section in teaching units   |
|---|--|---|--|
| 1 | UC-1,4,5<br>OPK-<br>1,4,5,10<br>PK-5,6.7 | patient with blood<br>diseases.<br>The main syndromes<br>and diseases of the<br>blood system 1.<br>Principles of<br>diagnosis in diseases       | 1. Features of complaints: general and specific. Anamnesis features: connection with past infections, chronic inflammatory diseases, etc.  2. Physical examination methods in the diagnosis of blood diseases. General examination: skin coloration, hemorrhages, traces of scratching. Examination of the oral cavity: swelling, puffiness, bleeding gums, redness, cracks, atrophied papillae of the tongue, necrotic changes on the tonsils, etc. Palpation of lymph nodes, liver, spleen: lymphadenopathy, hepatosplenomegaly.  3. Laboratory and instrumental research methods. Clinical blood analysis, bone marrow analysis, studies for hemorrhagic syndrome: coagulation of whole blood, duration of bleeding, blood clot retraction, capillary resistance, prothrombin index.  4. The main clinical syndromes in diseases of the hematopoietic organs: anemia syndrome, hemorrhagic syndrome, myeloproliferative, lymphoproliferative syndromes Clinical manifestations, laboratory diagnostics.  5. The main diseases of the hematopoiesis system. Anemia: posthemorrhagic, iron deficiency, hemolytic, aplastic. Leukemia: acute and chronic. Chronic myeloid leukemia and lymphocytic leukemia. Hemorrhagic diathesis: hemophilia, thrombocytopathies, vasopathies. Etiology, pathogenesis, clinical manifestations, diagnostic methods, principles of treatment. |
| 2 | UC-1,4,5<br>OPK-<br>1,4,5,10<br>PK-5,6.7 | Examination of a patient with diseases of the joints and musculoskeletal system.  The main syndromes and diseases of the musculoskeletal system | 1.The basic principles of diagnosis of diseases of joints and muscles. Questioning. Features of complaints and anamnesis.  2. Physical methods in rheumatology. General and local inspection. Examination of joints, muscles, bones. Palpation. Conducting special motor tests.  3. Laboratory and instrumental research methods in rheumatology. Biochemical blood tests (protein fractions, acute phase proteins); uric acid, its clearance; rheumatoid factor; resoquin test. Immunological methods: CEC, immunoglobulins, cryoglobulins, antibodies to antigenic determinants of streptococcus, hepatitis B virus, C, cardiolipin, native DNA, collagen, complement content, HLA-27. Immunofluorescence methods: smears from the urethra, cervix, rectum on chlamydia, mycoplasma, ureaplasma.  4. Methods of radiation diagnostics in rheumatology. Radiography of bones and joints, spine, ultrasound of joints, CT and MRI of joints and spine, densitometry, arthroscopy, puncture of joints, biopsy of synovial membranes.  5.The main diseases of the joints. Rheumatoid arthritis, ankylosing spodyloarthritis, osteoarthritis, gout, reactive arthritis, osteoporosis, Reiter's disease. Etiology, pathogenesis, clinical manifestations, laboratory and instrumental diagnostic methods, principles of treatment  |
| 3 | UC-1,4,5<br>OPK-<br>1,4,5,10             | Acute allergic diseases.  | Acute allergic reactions in the clinic of internal diseases. Urticaria. Quincke's edema. Anaphylactic shock. Causes, mechanisms of development, clinical manifestations, diagnostic methods, emergency   |

| - |          |      |
|---|----------|------|
|   | PK-5,6.7 | care |
|   | - ,      |      |

5. Volume of the academic discipline and types of academic work

| Type of educational work        |                   | Labor intensity volume in volume in |   |    | Labor intensity (AH) in semesters |  |  |  |
|---------------------------------|-------------------|-------------------------------------|---|----|-----------------------------------|--|--|--|
|                                 | credit units (CU) |                                     | 4 | 5  | 6                                 |  |  |  |
| Classroom work, including       | 0,61              | 22                                  | - | 22 |                                   |  |  |  |
| Lectures (L)                    | 0,17              | 6                                   | - | 6  |                                   |  |  |  |
| Laboratory practicum (LP)*      | -                 | -                                   | - | -  | -                                 |  |  |  |
| Practicals (P)                  | -                 | -                                   | - | -  | -                                 |  |  |  |
| Seminars (S)                    | 0,44              | 16                                  | - | 16 | -                                 |  |  |  |
| Student's individual work (SIW) | -                 | -                                   | - | -  | -                                 |  |  |  |
| Mid-term assessment             | 0,39              | 14                                  | - | 14 |                                   |  |  |  |
| credit/exam (specify the type)  |                   |                                     |   |    |                                   |  |  |  |
| TOTAL LABOR INTENSITY           | -                 | 36                                  |   | 36 |                                   |  |  |  |

#### 6. Content of the academic discipline

6.1. Sections of the discipline and types of academic work

|    | 0.1. Sections of the discipline and types of academic work |                                 |                                 |    |    |     |   |     |       |
|----|--|---------------------------------|---------------------------------|----|----|-----|---|-----|-------|
| No | S  | Name of the section of the      | Types of academic work* (in AH) |    |    |     |   |     |       |
|    | e  | academic discipline             | L                               | LP | PZ | KPZ | C | SRS | total |
|    | m  |                                 |                                 |    |    |     |   |     |       |
| 1  | 6  | Examination of a patient with   | 2                               | -  | -  | 7   | - | 6   | 15    |
|    |  | blood diseases.                 |                                 |    |    |     |   |     |       |
|    |  | The main syndromes and          |                                 |    |    |     |   |     |       |
|    |  | diseases of the blood system    |                                 |    |    |     |   |     |       |
| 2  | 6  | Examination of a patient with   | 2                               | -  | -  | 7   | - | 6   | 15    |
|    |  | diseases of the joints and      |                                 |    |    |     |   |     |       |
|    |  | musculoskeletal system.         |                                 |    |    |     |   |     |       |
|    |  | The main syndromes and          |                                 |    |    |     |   |     |       |
|    |  | diseases of the musculoskeletal |                                 |    |    |     |   |     |       |
|    |  | system.                         |                                 |    |    |     |   |     |       |
| 3  | 6  | Acute allergic diseases.        | 2                               | -  | -  | 2   | - | 2   | 6     |
|    |  | TOTAL                           |                                 |    |    |     |   |     |       |

<sup>\*</sup> L- lectures

 $LP-laboratory\ workshop$ 

PZ – practical exercises

KPZ – clinical practical training

C-seminars

 $SRS-independent\ work\ of\ a\ student$ 

#### 6.2. Thematic schedule of educational work types:

#### 6.2.1 Thematic schedule of lectures

| № | Name of lecture topics  | Volume in AH |
|---|---|--------------|
|   |   | Semester 6   |
| 1 | Modern diagnostic capabilities in diseases of the                             | 2            |
|   | hematopoiesis system. The main syndromes in                                   |              |
|   | blood diseases  |              |
| 2 | Modern diagnostic capabilities in diseases of the                             | 2            |
|   | musculoskeletal system. The main clinical syndromes in diseases of the joints |              |
| 3 | Acute allergic reactions. Modern diagnostics and                              | 2            |
|   | treatment approaches  |              |
|   | TOTAL (total - AH)  | 6            |

6.2.2. The thematic plan of laboratory practicums (if this type of classes is stipulated in the curriculum)

| № | Name of laboratory practicums  | Volume in AH<br>Semester 6 |  |
|---|--|----------------------------|--|
| 1 | The main syndromes and diseases of the blood system. Features of physical examination of the patient. Modern laboratory and instrumental methods of research in hematology. Blood diseases. Anemia. Erythremia. Leukemia. Hemorrhagic diathesis. Classification, etiology, pathogenesis, clinical manifestations, diagnosis. Modern principles of treatment. Patient curation.           | 7                          |  |
| 2 | Main syndromes in diseases of the musculoskeletal system. Features of physical examination of the patient. Modern laboratory and instrumental research methods in rheumatology. Diseases of the joints. Rheumatoid arthritis. Osteoarthritis. Ankylosing spondylitis. Gout. Reactive arthritis. Etiology, clinical manifestations, diagnosis, principles of treatment. Patient curation. | 7                          |  |
| 3 | Acute allergic reactions in the clinic of internal diseases. Urticaria. Quincke's edema. Anaphylactic shock. Etiology, clinical manifestations, modern diagnostics and treatment approaches  | 2                          |  |
|   | TOTAL (total - AH)   | 16                         |  |

6.2.3. Types and topics of student's individual work (SIW)

| № | Types and topics of SIW  | Volume in AH |
|---|--|--------------|
|   |  | semester 6   |
| 1 | Work with lecture material, review and study of literature, work with electronic educational resources on the topic: Major syndromes and diseases of the blood system. Features of physical examination of the patient. Modern laboratory and instrumental methods of research in hematology. Blood diseases. Anemia. Erythremia. Leukemia. Hemorrhagic diathesis. Classification, etiology, pathogenesis, clinical  | 7            |
|   | manifestations, diagnosis. Modern principles of treatment. Preparation for clinical practical classes; answers to control questions; preparation for computer testing, solving situational professional tasks.   |              |
| 2 | Work with lecture material, review and study of literature, work with electronic educational resources on the topic: The main syndromes in diseases of the musculoskeletal system. Features of physical examination of the patient. Modern laboratory and instrumental research methods in rheumatology. Diseases of the joints. Rheumatoid arthritis. Osteoarthritis. Ankylosing spondylitis. Reactive arthritis. Gout. Etiology, clinical manifestations, diagnosis, principles of treatment. Interpretation of radiographs, joint MRI results, preparation for clinical practical training; answers to control questions; preparation for computer testing, solving situational professional tasks. | 7            |
| 3 | Work with lecture material, study of lectures and educational literature Review and study of literature, work with electronic educational resources on the topic: Acute allergic reactions in the clinic of internal diseases. Urticaria. Quincke's edema. Anaphylactic shock. Etiology, clinical manifestations, modern diagnostics and treatment approaches.   | 2            |

| Interpretation of research results, allergological tests, preparation for clinical practical classes; answers to control questions; preparation for |    |
|---|----|
| computer testing, solving situational professional tasks.   |    |
| TOTAL (total - AH)  | 16 |

#### 6.2.4. Student's research work:

| Differential diagnosis of anemia   |  |
|--|--|
| Directinal diagnosis of ancilla  | 6  |
| Erythremia in the practice of a general practitioner   | 6  |
| Hemorrhagic diathesis in the practice of a general practitioner  | 6  |
| Acute leukemia. Modern diagnostics. Principles of treatment  | 6  |
| Chronic leukemia. Modern diagnostics. Principles of treatment  | 6  |
| Modern methods of laboratory and instrumental diagnostics for joint diseases                           | 6  |
| Osteoarthritis in the practice of a general practitioner. Modern approaches in diagnosis and treatment | 6  |
| Differential diagnosis of rheumatoid arthritis   | 6  |
| Modern laboratory and instrumental diagnostics of reactive arthritis                                   | 6  |
| Differential diagnosis of gout   | 6  |
| Pathogenetic approaches in the treatment of rheumatoid arthritis                                       | 6  |
| Ankylosing spondylitis. Current state of the problem   | 6  |
| Urticaria and Quincke's edema in the practice of a general practitioner                                | 6  |
| Quincke's edema and anaphylactic shock in the practice of a general practitioner                       | 6  |
| Iron deficiency anemia in the clinic of internal diseases  | 6  |
|  | Hemorrhagic diathesis in the practice of a general practitioner  Acute leukemia. Modern diagnostics. Principles of treatment  Chronic leukemia. Modern diagnostics. Principles of treatment  Modern methods of laboratory and instrumental diagnostics for joint diseases  Osteoarthritis in the practice of a general practitioner. Modern approaches in diagnosis and treatment  Differential diagnosis of rheumatoid arthritis  Modern laboratory and instrumental diagnostics of reactive arthritis  Differential diagnosis of gout  Pathogenetic approaches in the treatment of rheumatoid arthritis  Ankylosing spondylitis. Current state of the problem  Urticaria and Quincke's edema in the practice of a general practitioner  Quincke's edema and anaphylactic shock in the practice of a general practitioner |

The following educational technologies are used in the process of teaching the discipline:

- 1. Informational lecture, visualization lecture, problem lecture.
- 2. Clinical practical exercises at the patient's bedside, requiring the use of practical skills, discussion seminars, clinical analyses, practical training based on the case method, computer simulation.
- 3. The use of game technologies with the recreation of situations through educational, business and role-playing games.

Only 70% of interactive classes from the volume of classroom work.

Examples of educational technologies in an interactive form:

1. Discussion of educational clinical case histories during a practical lesson.

- 2. Collective discussion of anamnesis, symptoms, objective signs of the patient's disease based on the results of practical work at the patient's bedside seminar-discussion.
- 3. Student clinical Conference.

#### 7. Types of assessment formats for ongoing monitoring and mid-term assessment

|    |                         |                                |   |  |  | Assessment formats |                                |                                   |  |
|----|-------------------------|--------------------------------|---|--|--|--------------------|--------------------------------|-----------------------------------|--|
| №  | Se<br>mes<br>ter<br>No. | Types of                       | control   | Name of section of academic discipline Competence codes                    |  | types              | number of<br>test<br>questions | number of<br>test task<br>options |  |
| 1. | 6                       | Current<br>monito<br>ring      | Control of the student's independent work, control of the development of the topic Examination of a patient with blood diseases.  | The main syndromes and diseases of the blood system                        |  |                    |                                |                                   |  |
| 2. | 6                       | Mid-<br>term<br>assess<br>ment | Control of the student's independent work, control of the development of the topic, control of the development of practical skills  Examination of a patient with diseases of the joints and musculoskelet al system. | Interpretation<br>of the results<br>of blood and<br>bone marrow<br>studies |  |                    |                                |                                   |  |
| 3. | 6                       | Mid-<br>term<br>assess<br>ment | Control of the student's independent work, control of the development of the topic, control of the development of practical skills Acute allergic diseases.   | Acute allergic diseases.   |  |                    |                                |                                   |  |

| Exa | Intermediate    |  |  |  |
|-----|-----------------|--|--|--|
| m/  | certification.  |  |  |  |
| Cre | Credit All      |  |  |  |
| dit | sections of the |  |  |  |
|     | discipline      |  |  |  |
|     | Control         |  |  |  |
|     | questions       |  |  |  |

#### 7.1. Examples of evaluation tools:

#### 1. Intermediate certification - questions to prepare for the test:

- 1. The importance of anamnesis and physical examination in the diagnosis of major syndromes in diseases of the blood system.
- 2. The importance of anamnesis and physical examination in the diagnosis of major syndromes in diseases of the musculoskeletal system.
- 3. The importance of anamnesis and physical examination in the diagnosis of major syndromes in diseases of the joints.
- 4. The main syndromes in hematology. Definition, etiology, clinical manifestations, objective signs, laboratory and instrumental studies.
- 5. The main syndromes in traumatology. Definition, etiology, clinical manifestations, objective signs, laboratory and instrumental studies.
- 6. Anemia syndrome Definition, etiology, clinical manifestations, objective signs, laboratory and instrumental studies.
- 7. Iron deficiency anemia. Definition, etiology, clinical manifestations, objective signs, laboratory and instrumental studies. Treatment.
- 8. B12-deficiency anemia. Definition, etiology, clinical manifestations, objective signs, laboratory and instrumental studies. Treatment.
- 9. Posthemorrhagic anemia. Definition, etiology, clinical manifestations, objective signs, laboratory and instrumental studies. Treatment.
- 10. Hemolytic anemia Definition, etiology, clinical manifestations, objective signs, laboratory and instrumental studies. Treatment.
- 11. Acute leukemia. Definition, etiology, clinical manifestations, objective signs, laboratory and instrumental studies. Treatment.
- 12. Chronic leukemia. Definition, etiology, clinical manifestations, objective signs, laboratory and instrumental studies. Treatment.
- 13. Hemorrhagic diathesis. Definition, etiology, clinical manifestations, objective signs, laboratory and instrumental studies. Treatment.
- 14. Erythremia. Definition, etiology, clinical manifestations, objective signs, laboratory and instrumental studies. Treatment.
- 15. Thrombocytopenia. Definition, etiology, clinical manifestations, objective signs, laboratory and instrumental studies. Treatment.
- 16. Rheumatoid arthritis. Definition, etiology, clinical manifestations, objective signs, laboratory and instrumental studies. Treatment.
- 17. Ankylosing spondylitis. Definition, etiology, clinical manifestations, objective signs, laboratory and instrumental studies. Treatment.
- 18. Gout. Definition, etiology, clinical manifestations, objective signs, laboratory and instrumental studies. Treatment.
- 19. Reactive arthritis. Definition, etiology, clinical manifestations, objective signs, laboratory and instrumental studies. Treatment.
- 20. Osteoarthritis. Definition, etiology, clinical manifestations, objective signs, laboratory and instrumental studies. Treatment.
- 21. Reiter's disease. Definition, etiology, clinical manifestations, objective signs, laboratory and instrumental studies. Treatment.

- 22. Urticaria. Definition, etiology, clinical manifestations, objective signs, laboratory and instrumental studies. Treatment.
- 23. Quincke's edema. Definition, etiology, clinical manifestations, objective signs, laboratory and instrumental studies. Treatment.
- 24. Anaphylactic shock. Definition, etiology, clinical manifestations, objective signs, laboratory and instrumental studies. Treatment.
- 25. Modern research methods in hematology.
- 26. Modern research methods in rheumatology.
- 27. Modern research methods in immunology and allergology.
- 28. Methods of radiation diagnostics in rheumatology.
- 29. Allergological tests in the diagnosis of allergies. Skin and conjunctival tests.
- 30. Immunological research in the clinic of internal diseases.
- 2. Test control "Main syndromes in blood diseases"
- 1. What kind of noise can be heard in iron deficiency anemia?
- A) early systolic
- B) late systolic
- C) pansystolic
- D) diastolic with a presystolic component
- E) long-lasting
- 2. At the Hb level of 64 g/l, anemia is regarded as:
- a) mild severity;
- b) moderate severity;
- c) severe severity.
- D) this is a normal level of Hb
- 3. Enlarged lymph nodes are characteristic of:
- a) anemic syndrome;
- b) hyperplastic;
- c) hemorrhagic;
- d) plethoric;
- e) jaundice.
- 4. Leukemides are lymphoid infiltration:
- a) in the bones;
- b) joints;
- c) skin;
- d) lungs;
- e) the brain.
- 5. The spleen reaches a large size:
- a) in acute leukemia;
- b) chronic lymphocytic leukemia;
- c) chronic myeloid leukemia.
- d) with iron deficiency anemia
- 6. The following type of bleeding is characteristic of hemoblastosis:
- a) microcirculatory;
- b) hematomic;

- c) mixed;
- d) vasculitic purple;
- e) angiomatous.
- 7. Bleeding from the hole of the removed tooth for more than 30 minutes is characteristic of:
- a) infectious-toxic syndrome;
- b) hemorrhagic;
- c) anemic;
- d) cytolysis.
- 8. Hyperplastic syndrome is characterized by complaints:
- a) the proliferation of gingival papillae, their bleeding;
- b) enlargement of lymph nodes;
- c) skin leukemides;
- d) difficulty eating;
- e) dysphagia.
- 9. What kind of shortness of breath is most characteristic of anemia?
- A) stridorous breathing
- B) expiratory dyspnea
- C) Kussmaul breathing or Cheyne-Stokes breathing
- D) Cheyne-Stokes breathing or Biota breathing
- E) inspiratory dyspnea
- 10. What is an ECG sign of the development of myocardial ischemia in anemia?
- A) ST segment depression, left ventricular overload
- B) overload of the right ventricle
- C) the development of tachyarrhythmia
- D) development of atrioventricular blockade
- E) the appearance of a pathological Q wave
- 3. Situational tasks

#### Task 1

Erythrocytes  $3 \times 1012$ /l, hemoglobin 60 g/l, color index 0.6, leukocytes  $6.2 \times 109$ /l, eosinophils 2%, rod-shaped neutrophils 2%, segmented neutrophils 68%, lymphocytes 20%, monocytes 8%, platelets  $224.2 \times 109$ /l, ESR 26 mm/h, hypochromia +++, anisocytosis +++, poikilocytosis +++.

- 1 Give a conclusion on the hemogram.
- 2 Which hematological syndromes are characterized by this analysis?

#### Task 2

Erythrocytes  $1.32 \times 1012$  /l, hemoglobin 42 g/l, color index 1, leukocytes  $1.9 \times 109$  /l, eosinophils 1%, rod-shaped neutrophils 1%, segmented neutrophils 8%, lymphocytes 87%, monocytes 3%, reticulocytes 0.2%, platelets  $4.4 \times 109$  /l, ESR 66 mm/h.

- 1 Give a conclusion on the hemogram.
- 2 Which hematological syndromes are characterized by this analysis?

#### Task 3

A 35-year-old patient was admitted to the hospital with complaints of chest pain, which appeared for the first time a few weeks ago. The pain radiates to both shoulders and the shoulder blade on

the left. An attack of pain appeared when walking. In addition, she feels interruptions in the work of the heart, shortness of breath with minimal load, her head is spinning. It is known from the anamnesis that she has copious menstrual bleeding. Two births in the last 5 years. Breastfeeding for a year. On objective examination, the condition is of moderate severity, the patient is pale, the fingers are pale and cold. She has brittle nails and hair. There are jams in the corners of the mouth. Vital signs: pulse rate 115 per minute, pulse regular, low filling, respiratory rate 24 per minute, blood pressure 100/60 mmHg, temperature 37.0.. During auscultation of the heart, deaf regular heart tones with a heart rate of 115 per minute, soft systolic blowing noise with a volume of no more than 3 above the base of the heart are heard.

- 1. Name and justify the syndromes
- 2. Formulate the diagnosis in accordance with the modern classification.
- 2. Schedule an additional laboratory and instrumental examination of the patient.

## 8. Educational, methodological and informational support for mastering the academic discipline (printed, electronic publications, the Internet and other network resources)

8.1. Key literature references

| № | Name according to bibliographic requirements   | Number o          | of copies      |
|---|--|-------------------|----------------|
|   |  | at the department | in the library |
| 1 | Strongin L. G. Guidelines for case reports, anamnesis collection and physical examination: a textbook for foreign English-speaking medical students. NNSMA Publishing House, 2014 64 p. 10 10  |                   |                |
| 2 | Pocket Guide by Bickley Lynn S. Bates on Physical Examination and Anamnesis Collection. Lippincott, 2013.  |                   |                |
| 3 | Gritsevskaya I.M. Learning to listen and understand the patient: a textbook on learning Russian as a foreign language in the framework of clinical practice for foreign medical students. NizhGMA Publishing House, 2014. – 150 p. 1,155 |                   |                |
| 4 | Botova S. N. Practical aspects of spirometry: a textbook for foreign medical students. NNSMA Publishing House, 201556 p. 35  |                   |                |
| 5 | Strongin L. G. Interpretation of ECG data: a textbook for foreign English-speaking medical students. NNSMA Publishing House, 2014 68 p. 5 15   |                   |                |
| 6 | Strongin L. G. Diabetes mellitus: a textbook for foreign English-speaking medical students. NNSMA Publishing House, 2015100 p. 2 30  |                   |                |
| 7 | P. Kumar, M. ClarkClinical Medicine / ed. – 8th ed. – Edinburgh: Saunders, 2012. – 1286 p. 150   |                   |                |
| 8 | Longo Dan L. Harrison's Principles of Internal Medicine.<br>Vol. 1. McGraw-Hill, 2012 - 15   |                   |                |
| 9 | Longo Dan L. Harrison's Principles of Internal Medicine.<br>Vol.2. McGraw-Hill, 2012 - 15  |                   |                |

8.2. Further reading

| No | Name according to bibliographic requirements              | Number of copies  |                |
|----|---|-------------------|----------------|
|    |   | at the department | in the library |
| 1  | Collection of clinical history and examination Welsby     |                   |                |
|    | Philip D. Churchill Livingston, 2002–158 p.               |                   |                |
| 2  | Shchukin Yu.V. Propaedeutics of internal diseases Methods |                   |                |
|    | of patient research: textbook. Rostov-on-Don: Phoenix,    |                   |                |

|    | 2014. – 287s. 1 there is                                       |  |
|----|--|--|
| 3  | Propaedeutics of internal diseases: textbook. V. T. Ivashkin,  |  |
|    | A.V.Okhlobystin, Moscow: GEOTAR-Media, 2006 - 176 p.           |  |
| 4  | Swash M. Hutchison Clinical methods, - 21st ed                 |  |
|    | Edinburgh: W.B. Saunders, 2002. – 501 p.                       |  |
| 5  | J. R. Hampton "ECG made easy" – 7th ed. – Edinburgh:           |  |
|    | Churchill Livingston, 2008. – 179 p                            |  |
| 6  | V. Kumar, A. K. Abbas Robbins and Kotran "Pathological         |  |
|    | foundations of disease" edited by Vinay Kumar and Abul K.      |  |
|    | Abbas. 7th ed Elzevir Saunders, 2005. (2005) - 1525 p. 1       |  |
|    | CD.  |  |
| 7  | N. A. Boone, N. R. College, B. R. Walker, J. Hunter.           |  |
|    | Davidson's Principles and Practice of Medicine / edited –      |  |
|    | 20th ed. – Edinburgh: Churchill Livingston, 2006. – 1381 p.    |  |
| 8  | Mukhin N.A. Propaedeutics of internal diseases: a textbook     |  |
|    | with an appendix on a CD - 2nd ed. supplement and revision     |  |
|    | – M. : GEOTAR-Media, 2009. – 848 p.                            |  |
| 9  | Butov M.A. Propaedeutics of internal diseases: a textbook,     |  |
|    | Moscow: FORUM, 2011. – 512s.                                   |  |
| 10 | D. A. Shikhnebiev, Propaedeutics of internal diseases with     |  |
|    | the basics of general patient care: a textbook for students of |  |
|    | medical universities - Makhachkala : Nauka-Dagestan,           |  |
|    | 2015. – 252 p.   |  |

#### 8.3. List of methodological recommendations for independent work of students:

- 1. Strongin L. G. Guidelines for case reports, anamnesis collection and physical examination : a textbook for foreign English-speaking medical students. NNSMA Publishing House, 2014. 64 p. 10 10
- 2 Pocket Guide by Bickley Lynn S. Bates on Physical Examination and Anamnesis Collection. Lippincott, 2013. 170
- 3. Gritsevskaya I.M. Learning to listen and understand the patient: a textbook on learning Russian as a foreign language in the framework of clinical practice for foreign medical students. NizhGMA Publishing House, 2014. 150 p. 1,155
- 4. Botova S. N. Practical aspects of spirometry : a textbook for foreign medical students. NNSMA Publishing House, 2015.-56 p. 35
- 5. Strongin L. G. Interpretation of ECG data: a textbook for foreign English-speaking medical students. NNSMA Publishing House, 2014. 68 p. 5 15
- 6. Strongin L. G. Diabetes mellitus: a textbook for foreign English-speaking medical students. NNSMA Publishing House, 2015.-100 p. 2 30
- 7. P. Kumar, M. Clark..Clinical Medicine / ed. 8th ed. Edinburgh: Saunders, 2012. 1286 p. 150
- 8. Longo Dan L. Harrison's Principles of Internal Medicine. Vol. 1. McGraw-Hill, 2012 15
- 9. Longo Dan L. Harrison's Principles of Internal Medicine. Vol.2. McGraw-Hill, 2012 15
- 10. Collection and examination of clinical history.- Welsby Philip D. Churchill Livingston, 2002–158 p.
- 11. Propaedeutics of internal diseases: textbook. V. T. Ivashkin, A.V.Okhlobystin, Moscow: GEOTAR-Media, 2006 176 p.
- 12. Swash M. Hutchison clinical methods, 21st ed. Edinburgh: W.B. Saunders, 2002. 501 p.
- 13. J. R. Hampton "ECG made easy" 7th ed. Edinburgh: Churchill Livingston, 2008. 179 p
- 14. V. Kumar, A. K. Abbas Robbins and Kotran "Pathological foundations of disease" edited by Vinay Kumar and Abul K. Abbas. 7th ed.- Elzevir Saunders, 2005. (2005) 1525 p. 1 CD.
- 15. N. A. Boone, N. R. College, B. R. Walker, J. Hunter. Principles and Practice of Davidson Medicine / edited 20th ed. Edinburgh: Churchill Livingston, 2006. 1381 p
- 16. D. Kasper, E. Braunwald, A.Fauci, S.Hauser "Principles of Harrison's Internal Medicine" / edited 16th ed. McGraw-Hill Medical Publishing Department, 2018. 2783s. 1
- 8.4 Electronic educational resources for teaching academic subjects
- 8.4.1. Internal Electronic Library System of the University (IELSU)

| No | Name of the electronic resource                 | Brief description (content)   | Access conditions  | Number of users |
|----|---|---|--|-----------------|
|    | Internal Electronic Library<br>System (EBS) PIM | Works of PIM employees (textbooks, manuals, collections of tasks, manuals, laboratory work, monographs, etc.) | Access by individual login and password from any computer and mobile device is not limited |                 |

8.4.2. Electronic educational resources acquired by the University

|   | Electronic educational resource                |                             |                            |                 |
|---|--|-----------------------------|----------------------------|-----------------|
| № | Name of the electronic resource                | Brief description (content) | Access conditions          | Number of users |
|   | resource                                       |                             |                            |                 |
| 1 | Database "Medicine.                            |                             | Access by                  |                 |
|   | Healthcare (VO) and                            |                             | individual login           |                 |
|   | "Medicine. Healthcare (SPO)" as part of the    |                             | and password from any      |                 |
|   | database "Electronic library                   |                             | computer and               |                 |
|   | of a technical university                      |                             | mobile device              |                 |
|   | (EBS "Student Consultant"                      |                             |                            |                 |
|   | Textbooks and manuals for higher medical and   |                             |                            |                 |
|   | pharmaceutical education.                      |                             |                            |                 |
| 2 | Database "Doctor's                             |                             | Access by                  |                 |
|   | consultant. Electronic                         |                             | individual login           |                 |
|   | Medical Library" National guidelines, clinical |                             | and password from any      |                 |
|   | guidelines, textbooks,                         |                             | computer and               |                 |
|   | monographs, atlases,                           |                             | mobile device              |                 |
|   | reference books, etc.                          |                             |                            |                 |
|   | Access by individual login                     |                             |                            |                 |
|   | and password from any computer and mobile      |                             |                            |                 |
|   | device is not limited                          |                             |                            |                 |
| 3 | Database "Electronic                           |                             | Access by                  |                 |
|   | library system "Bukap"                         |                             | individual login           |                 |
|   | Educational and scientific                     |                             | and password               |                 |
|   | medical literature of                          |                             | from any                   |                 |
|   | Russian publishers, including translated       |                             | computer and mobile device |                 |
|   | editions. The collection of                    |                             | modific device             |                 |
|   | subscription publications is                   |                             |                            |                 |
|   | formed point-by-point.                         |                             |                            |                 |
|   | Access by individual login                     |                             |                            |                 |
|   | and password from any                          |                             |                            |                 |
|   | computer and mobile device.                    |                             |                            |                 |
| L | GC 1100.                                       | l                           | J                          |                 |

8.4.3 Open access resources

| 0.1.5               | o. 1.5 Open decess resources    |                              |                            |  |  |  |
|---------------------|---------------------------------|------------------------------|----------------------------|--|--|--|
| $N_{\underline{0}}$ | Name of the electronic resource | Brief description (content)  | Access conditions          |  |  |  |
|                     |                                 |                              |                            |  |  |  |
| 1.                  | EBS "Student Consultant"        | Educational resource         | Free from any computer and |  |  |  |
|                     |                                 | (www.studentlibrary.ru ) for | mobile device.             |  |  |  |

|   |   | students of medical and pharmaceutical universities is an electronic library system (EBS) that provides access via the Internet to electronic versions of educational, scientific literature and additional materials.   |   |
|---|---|--|---|
| 2 | «Free Medical Journals»                         | Catalog of links to foreign medical journals, open for free access to the full texts of articles.  http://www.freemedicaljournals.com / Free from any computer and mobile device.  | Free from any computer and mobile device. |
| 3 | http://www.freebooks4doctors.com/               | Catalog of links to foreign medical journals, open for free access to the full texts of articles.  http://www.freemedicaljournals.com / Free from any computer and mobile device.  | Free from any computer and mobile device. |
| 4 | High Wire. Library of the Sciences and Medicine | A large database of journal articles is presented on the website of the Stanford University Publishing House. Individual journals are completely open for free access. http://highwire.stanford.edu/   | Free from any computer and mobile device. |
| 5 | BioMed Central                                  | Electronic archive of open access to the results of research in the field of medicine, biology and technology. The portfolio includes articles from more than two hundred peer-reviewed journals http://www.biomedcentral.com  | Free from any computer and mobile device. |
| 6 | Oxford Medicine                                 | Online is a collection of publications of the Oxford Publishing House on medical topics, combining over 350 publications into a common resource with the possibility of cross-searching. Publications include The Oxford Handbook of Clinical Medicine and The Oxford Textbook of Medicine, the electronic versions of which are constantly updated. http://www.oxfordmedicine.com | Free from any computer and mobile device. |
| 7 | PubMed  | Is a free search engine in the largest medical bibliographic database MedLine. Documents medical and biological articles from specialized literature, and also provides links to full-text   | Free from any computer and mobile device. |

|  | articles.                      |  |
|--|--------------------------------|--|
|  | http://www.ncbi.nlm.nih.gov/pu |  |
|  | bmed                           |  |

#### 9. Material and technical support for mastering an academic discipline

- 9.1. The list of premises required for conducting classroom classes in the discipline.
- 1. Lecture hall equipped with presentation equipment, multimedia complex (screen, laptop, projector).
- 2. An auditorium equipped with an interactive complex for practical classes and conferences.
- 3. Classrooms for conducting practical classes with students (3 classrooms), information stands, computers, interactive whiteboards, multimedia complex, slide show, DVD films by sections: methods of examination of a patient in therapeutic practice, assessment of vital signs, examination of a patient with diseases of the respiratory system, cardiovascular system, gastrointestinal diseasesintestinal tract, with joint diseases, auscultation of the heart, auscultation of the lungs, cardiac murmurs.
- 4. Offices for working with patients receiving medical care in therapeutic, cardiological, intensive care, polyclinic departments, as well as undergoing examination in the department of functional diagnostics and endoscopy.
- 9.2. List of equipment\* required for conducting classroom classes in the discipline.
- 1. Information stands
- 2. Personal computers
- 3. Interactive whiteboard with multimedia complex
- 4. TV
- 5. Slide show,
- 6. DVD films by sections: methods of examination of a patient in therapeutic practice, assessment of vital signs, examination of a patient with diseases of the respiratory system, cardiovascular system, gastrointestinal tract diseases, joint diseases, auscultation of the heart, auscultation of the lungs, cardiac murmurs.
- 7. Magnetic marker boards
- 8. Sets of thematic tables and multimedia visual materials on various sections of the discipline
- 9. A set of electrocardiograms, spirograms, echocardiograms, radiographs, blood tests, urine, sputum

9.3. A set of licensed and freely distributed software, including domestic production

|     | Software          | number   | Type of software   | Manufacture  | Number in   | Contract No.   |
|-----|-------------------|----------|--------------------|--------------|-------------|----------------|
| Ite |                   | of       |                    | r            | the unified | and date       |
| m   |                   | licenses |                    |              | register of |                |
| no. |                   |          |                    |              | Russian     |                |
|     |                   |          |                    |              | software    |                |
| 1   | Wtware            | 100      | Thin Client        | Kovalev      | 1960        | 2471/05-18     |
|     |                   |          | Operating System   | Andrey       |             | from           |
|     |                   |          |                    | Alexandrovic |             | 28.05.2018     |
|     |                   |          |                    | h            |             |                |
| 2   | MyOffice is       | 220      | Office Application | LLC "NEW     | 283         | without        |
|     | Standard. A       |          |                    | CLOUD        |             | limitation,    |
|     | corporate user    |          |                    | TECHNOLO     |             | with the right |
|     | license for       |          |                    | GIES"        |             | to receive     |
|     | educational       |          |                    |              |             | updates for 1  |
|     | organizations,    |          |                    |              |             | year.          |
|     | with no           |          |                    |              |             |                |
|     | expiration date,  |          |                    |              |             |                |
|     | with the right to |          |                    |              |             |                |
|     | receive updates   |          |                    |              |             |                |
|     | for 1 year.       |          |                    |              |             |                |
| 3   | LibreOffice       |          | Office Application | The          | Freely      |                |
|     |                   |          |                    | Document     | distributed |                |
|     |                   |          |                    | Foundation   | software    |                |

| 4 | Windows 10<br>Education   | 700 | Operating systems     | Microsoft | Azure Dev<br>Tools for<br>Teaching<br>Subscriptio |   |
|---|---|-----|-----------------------|-----------|---|---|
| 5 | Yandex. Browser   |     | Browser               | «Yandex»  | 3722  |   |
| 6 | Subscription to<br>MS Office Pro<br>for 170 PCs for<br>FGBOU VO<br>"PIMU" of the<br>Ministry of<br>Health of Russia | 170 | Office<br>Application | Microsoft |   | 23618/HN100<br>30 LLC<br>"Softline<br>Trade" from<br>04.12.2020 |

10. List of changes to the working program (to be filled out by the template)

Federal State Budgetary Educational Institution of Higher Education
"Privolzhsky Research Medical University"

Ministry of Health of the Russian Federation
(FSBEI HE "PRMU" of the Ministry of Health of Russia)

Department of *Name of the department* 

#### **CHANGE REGISTRATION SHEET**

### working program for the academic discipline *NAME OF THE ACADEMIC DISCIPLINE*

|   | study / specialty / science g profile: | <br>(code, no                           | ame)                          |                         |  |  |  |  |
|---|--|---|-------------------------------|-------------------------|--|--|--|--|
| Mode of   | f study:                               |   | <del></del>                   |                         |  |  |  |  |
|   |  | full-time/mixed attendance mode/extramu | ral                           |                         |  |  |  |  |
|   |  |   |                               |                         |  |  |  |  |
| Position  | Number and name of the program section | Contents of the changes made            | Effective date of the changes | Contributor's signature |  |  |  |  |
| 1   |  |   |                               | J                       |  |  |  |  |
|   |  |   |                               |                         |  |  |  |  |
|   |  |   |                               |                         |  |  |  |  |
| Approved at the department meeting  Protocol Noof20 |  |   |                               |                         |  |  |  |  |
| Head of   | Head of the Department                 |   |                               |                         |  |  |  |  |

signature

print name

department name, academic title